

TIMELY TURF TOPICS

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DOLLARSPOT AND BROWNPATCH CONTROL ON RYEGRASS GREENS IN GEORGIA: Last winter on ryegrass greens at the Sea Island Golf Club in Georgia, tests were made with tetramethyl thiuramdisulfide (available commercially under the trade name Thiosan) as a mercury substitute in control of dollarspot and brownpatch. During November and December all greens were treated with tetramethyl thiuramdisulfide at the rate of $1\frac{1}{2}$ pounds to 6,000 square feet as dollarspot appeared. This kept dollarspot fairly well in check. At the end of December, four greens were treated with a calomel-corrosive sublimate mixture at 1 ounce to 1,000 square feet, applied dry and mixed with sand. The other greens were again treated with tetramethyl thiuramdisulfide at the original rate. As the season progressed no difference in results could be observed between greens treated with the mercury mixture and those treated with the mercury substitute. Both brownpatch and dollarspot had been held under reasonably good control in both cases. Later in January halves of two greens were treated with calomel at $1\frac{1}{2}$ ounces to 1,000 square feet, dry mixed with sand, whereas the other halves were sprayed with the mercury at $1\frac{1}{2}$ pounds to 6,000 square feet. These comparative treatments were made in February and again in March as dollarspot and brownpatch became troublesome.

While these tests were not conclusive since applications were made at irregular intervals as disease attacks necessitated and labor permitted, they indicated equally as satisfactory results with the mercury substitute as with the mercury compounds themselves. Although the disease was not completely controlled by these irregular treatments, it was definitely kept in check, as evidenced by the fact that one practice green on the same course which received no fungicide treatment whatever became severely infected with dollarspot in December and, although reseeded, became reinfected and remained so for the rest of the season.

CURRENT REVISIONS OF RESTRICTIONS ON PESTICIDES: For the most part, the outlook for 1944 supplies of such essential insecticides and fungicides as rotenone, arsenicals and mercury is more promising than was that for 1943. It is expected that the rotenone supplies will be somewhat larger as the production by the Latin-American countries is increased and therefore the list of uses for next year has been expanded, although it will still be necessary to use substitutes for many purposes. Although not available for use on turf, small sized packages will be available for the protection of Victory Garden crops. Nicotine, of which there is a greatly increased production, may be substituted for rotenone wherever possible. Other possible substitutes are Cryolite and lethane. The production of arsenate of lead has increased some 15 percent over last year but its use for the protection of such plants as turf grasses, shade trees, etc., will probably still be discouraged. The use of barium fluosilicate is being encouraged as a substitute for the arsenicals for poison baits. War Production regulations so far as mercury is concerned have become more liberal, the restrictions having been lifted from its use in the manufacture of agricultural disinfectants, insecticides and fungicides, except turf fungicides. The restrictions on the use of mercurials in the control of turf diseases, therefore, will still be effective. The situation so far as pyrethrum is concerned, however, will probably be more acute than last year, most of the year's production being necessary for use by the armed services. Substitutes such as the organic thiocyanates and lethane will have to be used wherever possible in crop production.

CHARCOAL TREATMENTS ON GREENS: Numerous inquiries have been received as the result of the article which appeared in the June issue of *TIMELY TURF TOPICS* on the use of charcoal in putting green maintenance at the Canterbury Golf Club in Cleveland. For those who are interested in considering the adoption of some such treatment next spring in order to encourage deeper root growth, more detailed information regarding the type of charcoal used and the method of applying it are given here. This information has been obtained from Mr. Franklin L. Miller of the Canterbury Golf Club.

The charcoal which was used so successfully at Canterbury was a wood charcoal manufactured by the Cleveland Charcoal Supply Company. It was a product which had been sifted through a 30-mesh screen. From 80 to 110 pounds per 1,000 square feet have been used at Canterbury in each treatment.

As indicated in the previous article (see *TIMELY TURF TOPICS* for June, 1943) the greens were spiked by the use of forks made with 6 hollow tines $4\frac{1}{2}$ inches long and $7/16$ -inch in diameter, spaced 2 inches apart. After the greens were spiked the charcoal was applied by means of a home-made device consisting of a tin filler box 12 inches long, 8 inches wide, and 5 inches deep. Holes were drilled in the bottom of the box and hollow tines identical in size with those of the fork and spaced at the same distance apart were attached. A metal slide, one end of which extended 3 inches from the end of the box, served as an operating handle. Holes were drilled through this slide and spaced to conform with the spacing of the hollow tines themselves. When the holes in this slide were superimposed on the hollow tines the charcoal could escape into the tines and consequently pass into the holes in the green. When the holes were filled the slide was pushed back, thereby closing the tine holes. The man with this filler box followed the operator with the spiking fork and allowed only enough charcoal to enter the tine holes to come within $1/4$ to $1/2$ inch of the surface of the green.

It has been estimated that 48 man hours are required to apply this treatment to a green of 6,000 square feet. Although at Canterbury complete treatments were given in the fall, they did not hesitate at any time during the season when necessity of the treatment was indicated, to treat high spots which dried out during the summer months or low spots where moisture tended to accumulate. No evidence of any toxicity to the grass as a result of the use of this type of charcoal was observed.

PAMPHLETS ON CARE OF MOTOR-DRIVEN EQUIPMENT: Now that the lifetime of motor-operated machines must be extended to the limit it is important to follow expert advice in the care and repair of such equipment. Recognizing the need for information and recommendations regarding the care and repair of motor vehicles, the Office of Defense Transportation has published a series of exceedingly helpful, well illustrated pamphlets on various phases of the subject. These have been prepared for the Office of Defense Transportation by the Society of Automotive Engineers and any or all of the series may be obtained from the Office of Defense Transportation, 1147 New Post Office Building, Washington, D. C.; from any of the 143 district offices of the Office of Defense Transportation, Division of Motor Transport; or from regional offices of the ODT, Office of Information. At this time of year attention of our readers may well be drawn particularly to the 34-page pamphlet entitled, "Cooling System: Cleaning, Flushing, Rust Prevention, and Antifreeze." The pamphlet is divided into 7 sections, each of which is well illustrated by drawings and photographs. The sections include such subjects as, "Routine Maintenance of Cooling System," "Diagnosis of Overheating and Overcooling," "Cooling-System Corrosion and its Prevention," "Characteristics of Different Types of Antifreeze," etc.

Other pamphlets which may be of interest in connection with the maintenance of trucks, tractors, etc., are: "Pistons to Fit Reconditioned Cylinders," "Reconditioning Brake Drums, Limits and Tolerances," "Hard-Surfacing Applications and Techniques," "Cold Welding," and "Preventive Maintenance and Inspection Procedure." This is the time to obtain concise statements of vital information regarding the most efficient maintenance of motor-driven equipment which will be equally as useful in the economical operation of golf courses after the war as at present.

IDENTITY OF CREEPING BENT STRAINS PLANTED ON EXPERIMENTAL GREENS: During 1939 and 1940 the Green Section established a series of 40 experimental greens (see **TIMELY TURF TOPICS**, June, 1940, page 2), locating them in as many as possible of the leading golf areas where bents will grow. The objective of these plantings was to test the relative merits under various climatic conditions of some of the vegetative strains of creeping bent which had given most promise on the turf garden at the Arlington Experiment Farm.

For comparison purposes there was included on each experimental green along with numerous of the Green Section strains one or more commercial vegetative strains as well as one or more strains which are regularly propagated by seed. All of the strains including the standard commercial ones were referred to by key numbers in order to avoid any partiality in scoring the different grasses.

At the time the greens were established, cooperating clubs were promised that after 3 years of ratings were recorded the identity of the strains would be disclosed. Several clubs have requested the identity of the strains this summer and have indicated that if this information were available it would be easier to interest golfers in rating the plantings. It has therefore seemed advisable at this time to include in the accompanying table the origin of all Green Section selections as well as the identity of the commercial strains used on any of the experimental greens.

STRAIN	CLUB WHERE FOUND ORIGINALLY	CITY	STATE	DATE
C 1	Country Club of Atlantic City	Atlantic City	New Jersey	1928
C 4	Arlington Turf Garden	Arlington	Virginia	1934
C 5	Arlington Turf Garden	Arlington	Virginia	1934
C 7	Pine Valley Golf Club	Clementon	New Jersey	1935
C 8	Baltimore Country Club	Baltimore	Maryland	1935
C 9	Washington Golf & Country Club	Arlington	Virginia	1936
C 11	Washington Golf & Country Club	Arlington	Virginia	1936
C 12	Los Angeles Country Club	Beverly Hills	California	1936
C 14	Toronto Golf Club	Long Branch	Ontario	1936
C 15	Toronto Golf Club	Long Branch	Ontario	1936
C 16	Rolling Green Golf Club	Springfield	Pennsylvania	1936
C 17	Manor Country Club	Norbeck	Maryland	1936
C 19	Congressional Country Club	Washington	D. C.	1936
C 27	Washington Golf & Country Club	Arlington	Virginia	1937
C 28	Washington Golf & Country Club	Arlington	Virginia	1937
C 32	Congressional Country Club	Washington	D. C.	1936
C 35	Manor Country Club	Norbeck	Maryland	1937
C 36	Manor Country Club	Norbeck	Maryland	1937
C 38	Arlington Turf Garden	Arlington	Virginia	1937
COMMERCIAL STRAINS				
C 50	- Washington bent			
C 51	- Metropolitan bent			
C 52	- Old Orchard bent			
C 60	- Seaside bent			
C 61	- Astoria bent			
C 65	- Highland Colonial bent			

FOUR YEARS OF TIMELY TURF TOPICS: Since May, 1940, 22 issues have been published. As a result of the many changes in personnel incident to the nation's "all-out" war effort it is probable that many who are now responsible for the maintenance of turf under these trying conditions will not be acquainted with the information available in **TIMELY TURF TOPICS**. For this reason it seemed advisable at this time to publish an index to the information which thus far has appeared in this medium. Every member club of the United States Golf Association receives two copies of each issue from the Green Section. In order that the two people in each club who are most interested and primarily concerned with the turf on the course may receive the current copies as they are issued, it is hoped that all member clubs will inform the Green Section of any changes in such personnel. Back copies of all numbers are still available and can be obtained at a cost of \$1.00 a year.

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